

Remarks

This Response is considered fully responsive to the Final Office Action mailed August 28, 2008. Filed herewith is a Request for Continued Examination (RCE) and a three-month Petition for Extension of Time. In this Response, claims 42-46 have been added and no claims have been canceled. Claims 1 and 30 have been amended for purposes of clarity. Therefore, claims 1-7, 9, 14-17, and 30-46 remain pending in the Application. Reexamination and reconsideration are requested.

Telephone Interview

Applicant kindly thanks the Examiner for the January 12, 2009, telephone interview in which Applicant's representative, Jonathan Siekmann, spoke to the Examiner. Applicant's representative and the Examiner discussed whether the finality of the pending Office Action is proper, as well as the patentability of the independent claims in light of the cited references, particularly the Kavak reference.

Rejections Under 35 U.S.C. §103(a)

Claims 1, 2, 4, 14, 16, 17, 30, 31, 34, 35, 38, 39, 41 were rejected under 35 U.S.C. §103(a) as being unpatentable over Kavak, U.S. Patent No. 6,687,731 ("Kavak") in view of Yates et al., U.S. Patent No. 6,167,438 ("Yates"). The Applicant respectfully traverses the rejection for at least the following reasons.

Kavak generally relates to load sharing in a network. For example, "a number of replicated servers (5A-5E) belong to an anycast-group and each anycast-group is connected to a domain name server (2)" (Kavak, Abstract). The domain name server "has the ability to select one of the replicated servers, so that a router (4) can establish a connection between the selected server and the service-requesting client computer" (Kavak, Abstract). Additionally, "[e]ach replicated server (5A-5E) can transmit a resource advertisement which contains information about available resources at the server in question" (Kavak, Abstract).

Yates generally relates to using a system of distributed servers for caching, prefetching, and replication in a computer network (Yates, Abstract). For example, "[c]ache servers may cooperate to service client requests by caching and discarding documents based on its local load,

the load on its neighboring caches, attached communication path load, and on document popularity” (Yates, Abstract).

Applicant contends that Kavak and Yates, taken alone or in combination, neither teach nor suggest all the limitations of currently amended claim 1.

Independent claim 1 reads as follows:

1. . . . A method of content delivery in a network, comprising:
 - associating each of a plurality of devices in a Domain Name System (DNS) with one of a plurality of cache server systems located in the network and maintaining on each of the cache server systems content stored on an origin server;
 - assigning to the DNS devices a common address;**
 - advertising, by each of the DNS devices, the common address within the network** to indicate that the content is available for retrieval from each associated cache server system by end user systems communicatively connected to the network;
 - monitoring one or more load characteristics of one or more of the cache server systems in the network;
 - determining if one or more of the load characteristics exceeds a predefined overload metric; and
 - discontinuing advertising of the common address by each DNS device** associated with a cache server system determined to have a load characteristic that exceeds the predefined overload metric.

From the onset, Applicant would like to emphasize that in claim 1 the common address is assigned to the DNS devices, and it is the DNS devices that perform the steps of advertising and discontinuing advertising the common address. By contrast, the system in Kavak does not assign a common address (e.g., anycast address) to its domain name server. Instead, the common address in Kavak is assigned to its replicating servers (i.e., servers 5A-5E). This is exemplified in the following passage:

“In the network there are a number of routers 4, which establish connections with servers 5A to 5E as service suppliers. All the servers 5A, 5B, 5C, 5D, 5E are copies of each other and constitute the same anycast-group or ‘common address group.’”

(Kavak, col. 3, lines 16-20, and FIG. 1)

Furthermore, it is the replicating servers (i.e., servers 5A-5E) in Kavak, not the domain name server (i.e., DNS 2), that advertise this common address. This is exemplified in the passage the Examiner used to reject the “advertising” step of claim 1:

“To make load sharing distribution to least loaded servers, each server needs to inform the surroundings about its accessible resources. To this purpose a Resource Advertisement (RA) is transmitted... Each server produces a resource advertisement for each coverage area...”

(Kavak, col. 4, lines 30-36)

The Examiner uses this same passage to reject the “discontinuing advertising” step of claim 1. Applicant has reviewed the entire Kavak patent document and was unable to find any teaching or suggestion of functionality related to discontinuing advertising a common address - particularly a DNS device that discontinues advertising a common address. Even assuming, *arguendo*, that Kavak infers discontinuing advertising a common address, this would only be performed by the replicating servers (i.e., servers 5A-5E) since it is the replicating servers that transmit the Resource Advertisements (RAs).

As a practical matter, and due the fact that Kavak implements only a single domain name server in describing the invention (both in the specification and figures), there is no apparent functional or logical reason for the system in Kavak to assign a “common address” to only this single entity. Furthermore, one of ordinary skill in the art could not infer from Kavak that it would be advantageous to implement multiple DNS devices sharing a common address for purposes of managing load across multiple replicating or cache servers. In fact, Kavak teaches away from such a multi-DNS system. If, for example, another DNS device is added to the system in Kavak and shares a common address with the already-present DNS device (i.e., DNS 2), such an addition would create another layer of complexity, both from a routing and a load-balancing standpoint.

If the rejection is to be maintained, Applicant respectfully requests the Examiner to particularly point out where Kavak and/or Yates teach a method including, *inter alia*, assigning a common address to DNS devices, advertising the common address by the DNS devices, and discontinuing advertising the common address by the DNS devices.

For at least these reasons, claim 1 is patentable over the cited references and is in a condition for allowance. As claims 2-7, 9, and 14-17 depend from allowable claim 1, these claims are also in a condition for allowance.

Additionally, as independent claim 30, 34, 38, and 41 contain the same or similar limitations as allowable claim 1, these claims are also patentable over the cited references for at least the reasons discussed above and are in a condition for allowance. As claims 31-33, 35-37, and 39-40 depend from allowable claims 30, 34, and 38, respectively, these claims are also in a condition for allowance.

New Claims

Claims 42-43 and 44-46, which ultimately depend from allowable independent claims 1 and 30, respectively, have been added in this Response. Support for these claims can be found throughout the Specification and Figures and, in particular, in the published application (U.S. Publ. No. 20030079027), for example, at paragraphs [0027], [0034]-[0037], [0044], and in FIG. 3. Applicant maintains that no new matter has been added and that these claims are patentable over the cited art of record.

Conclusion

Claims 1-7, 9, 14-17, and 30-46 are currently pending in the application. Applicant believes that claims 1-7, 9, 14-17, and 30-46 are in a condition for allowance. Applicant therefore requests that a timely Notice of Allowance be issued in this case.

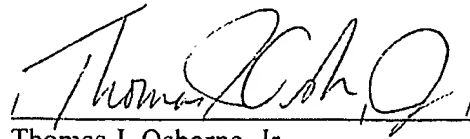
The Commissioner is authorized to deduct any additional fees from or credit any overpayment to the undersigned's account no. 503199.

If the Examiner should require any additional information or amendment, please contact

the undersigned attorney. If the Examiner believes any issues could be resolved via a telephone interview, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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Attachments: Request for Continued Examination
Petition for Extension of Time